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Positive effects can be achieved by continuously performing preventive care and other medical activities, but performing the same activities every day can be a cause of mental strain for patients. Therefore, research has been conducted to encourage the use of the motor system by maintaining the motivation of users and incorporating games that users can voluntarily engage in. The Kinect system developed by Microsoft is capable of recognizing the posture of a person and the three-dimensional coordinates of his or her joints, and research and development of a system that uses Kinect to measure limb movements for rehabilitation purposes is underway. Kinect can detect real-world human postures and can therefore also be used to recognize antagonistic movements. Recently, several Kinect-compliant commercial rehabilitation systems have been developed. We previously designed and developed a prototype lower limb chair motion support system using depth image sensors to evaluate, and evaluated its performance and ease of use. The system recognizes and evaluates motion based on 3D positional data and joint angles in skeletal and RGB data acquired from Kinect sensors. In this study, we designed, implemented, and evaluated a system that aids antagonistic movement using through the use of depth sensors. The system uses skeletal data on the user's joints acquired from depth sensors to recognize movement and assesses user movement to provide immediate feedback. In addition, we use an audiovisual display is used to explain the exercise procedure to the user and to play the immediate real-time video to encourage movement. The system also has a rhythm game function that allows users to adjust their movements to music. The system includes four types of exercises: upper/lower limb antagonism, upper left/right limb antagonism, soaking rock-paper-scissors with both arms and legs, and biceps/tripple double-time triple time double-time / triple-time exercise.

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